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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,074	03/19/2004	George Ord	11836.019403	7913

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EXAMINER	
BANKHEAD, GENE LOUIS	
ART UNIT	**PAPER NUMBER**
3744	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/805,074	ORD ET AL.	
	Examiner	Art Unit	
	Gene L. Bankhead	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) *29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/25/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 13 is objected to because of the following informalities:

"Said end protrudes from said valve", (claim 13 line 7), is believed to read --said end knob protrudes from said valve--.

Appropriate correction required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 recites the limitation "said spring rate" in line 7. There is no antecedent basis for this limitation in the claim.

Appropriate correction required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5,7,9-11,15-19,21, and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Mutter (US 6341620).

Regarding claim 1, Mutter teaches a temperature compensation valve with an inlet and outlet openings (8, 9). He further teaches an orifice 4 located between the inlet and outlet openings. See Figure 1. He further teaches a means for varying the orifice size to allow for a defined flow rate with fluctuations in temperature (column 1 lines 55-60, column 2 lines 1-20 and column 3 lines 50-60).

In regard to claim 2 Mutter teach a piston 7 positioned across from the inlet to modulate flow rate as a function of temperature. It should be of note the inlet 8 is being considered as the entire portion as outlined in Figure 1.

With regard to claims 3 and 4, Mutter teaches the piston 7 comprises a first side, and a second side. He further teaches the first side is adjacent to a puck 10, and the second side is adjacent to a spring 5. See Figure 1 below.

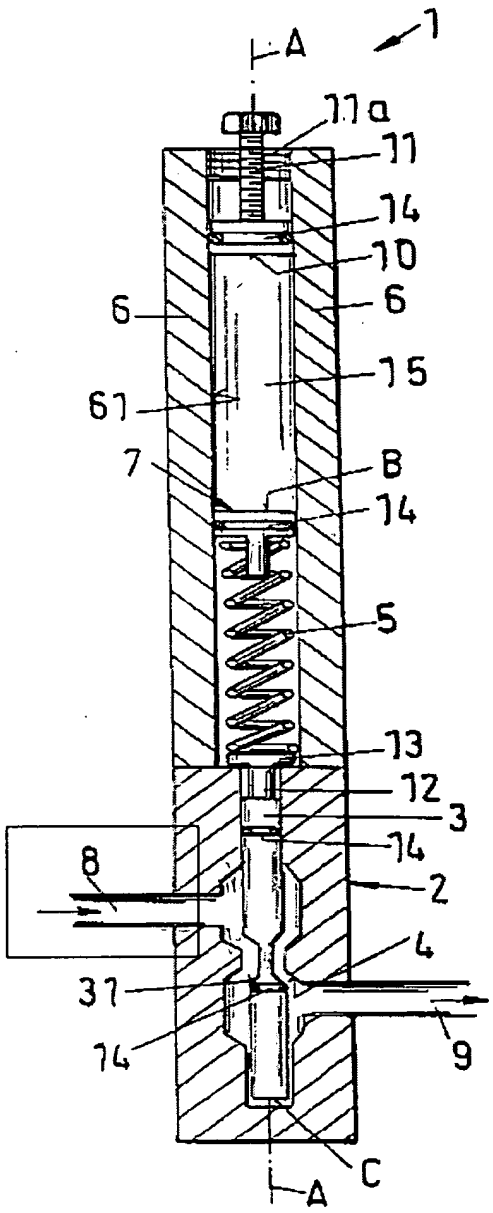

Figure 1 (Mutter US 6341620)

Regarding claim 5, Mutter teaches a flanged end housing the spring on the second side of the piston.

With regard to claim 7, Mutter teaches the spring urges the piston away from the orifice. Note from Figure 1 the spring exerts a force on the piston in an opposite direction of the orifice.

With regard to claim 9, Mutter teaches the piston 7 further comprises a pair of annular grooves, with an o-ring 14 situated in each groove.

In regard to claims 10 and 11, Mutter teaches a fine tuning adjuster 1, and further teaches the fine tuning adjuster comprises a threaded nut 11 and a threaded fitting 11a. Mutter further teaches as the threaded nut is advanced it urges the puck toward the piston to reduce the size of the orifice. Note Mutter teaches the volume 15 is filled with fluid (column 4 lines 60-67 and column 5 lines 1-5) and that the opening 63, in the inner cylinder 6b, is provided for fluid in the volume to act on the piston (column 7 lines 50-55). Basic principles of fluid mechanics teach it is inherent that as the fine-tuning adjuster advances toward piston 10 the piston 7 will move toward the orifice.

Regarding claim 15, Mutter teaches a pneumatic control system 1. He further teaches the valve is used extensively in gas filling stations (column 1 lines 7-25). Mutter further teaches a temperature compensation valve with an inlet 8, and outlet opening 9. He further teaches an orifice located between the inlet and outlet openings. See Figure 1 above. He further teaches a means for varying the orifice size to allow for a defined flow rate with fluctuations in temperature (column 1 lines 55-60, column 2 lines 1-20 and column 3 lines 50-60).

In regard to claims 16-21 and 23-25, see the rejections of claims 2-7, and 9-11 as claims cite similar subject matter.

Claims 12-14, and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Roach (US 55784).

With regards to claims 12-14, Roach teaches a temperature compensation valve with an inlet and outlet opening (l, n); an orifice k between the inlet and outlet openings; and a means for varying the size of the orifice to allow for a defined flow rate with fluctuations in temperature (a). Roach further teaches a piston, see Figure 2 below, positioned across the inlet and capable of modulating flow rate as a function of temperature. Roach further teaches the piston comprises a first side adjacent to a puck w, and a second side adjacent to a biasing means B. Roach further teaches a position measurement rod e, with a center rod (see Figure 2), and an end knob K. Roach teaches the center rod has a first side adjacent to the piston and a second side indirectly attached to the end knob. Roach further teaches the end knob protrudes from the valve to provide a visual indication of the position of the piston. Note, if the distance from the top of the end knob to the bottom of the piston is known the position of the piston inside the valve when the end knob is depressed can be determined from simple mathematics. Roach further teaches the center rod is substantially surrounded by the biasing means B. See Figure 1.

With regard to claim s 26-28, see the rejection of claims 12-15 respectively.

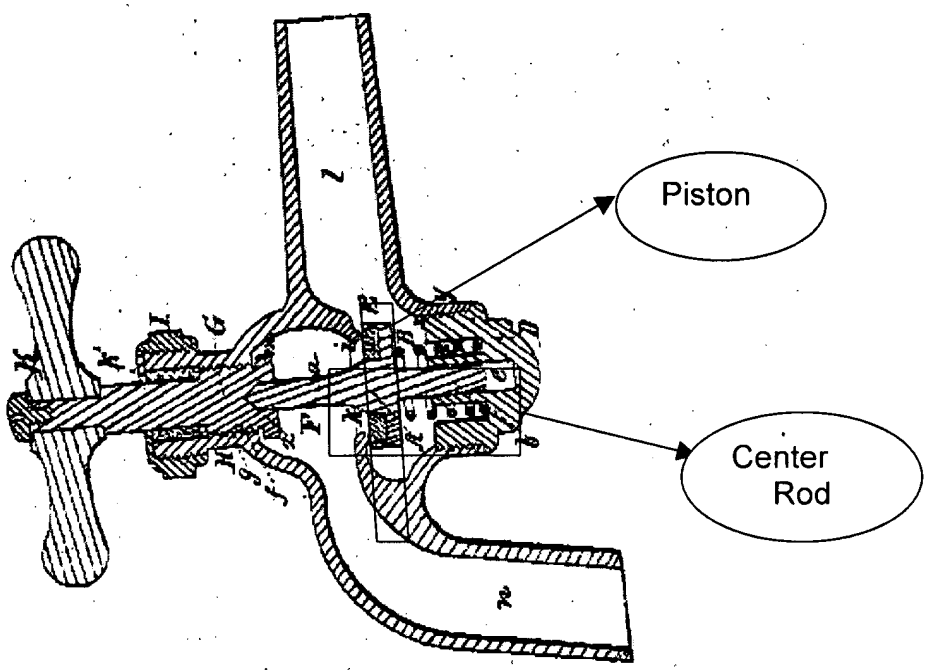

Figure 2 Roach (US 55784)

Claims 1,2,3 and 6 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Fackler (US 4203545).

In regard to claims 1,2,3 and 6, Fackler teaches a temperature compensation valve with an inlet 20 and outlet 18. He further teaches an orifice 16 allowing for communication between the inlet and outlet 16, and a piston for varying the size of the orifice based on temperature 32 (column 3 lines 1-20). Fackler further teaches a piston 62 has a first side adjacent to a puck 60 and a second side adjacent to a biasing means 54. See Figure 3 below. Fackler further teaches the puck expands as temperature increases thereby urging said piston toward the orifice (column 3 lines 37-58).

With regard to claim 20, see the rejection of claim 6 as the claims cite similar subject matter.

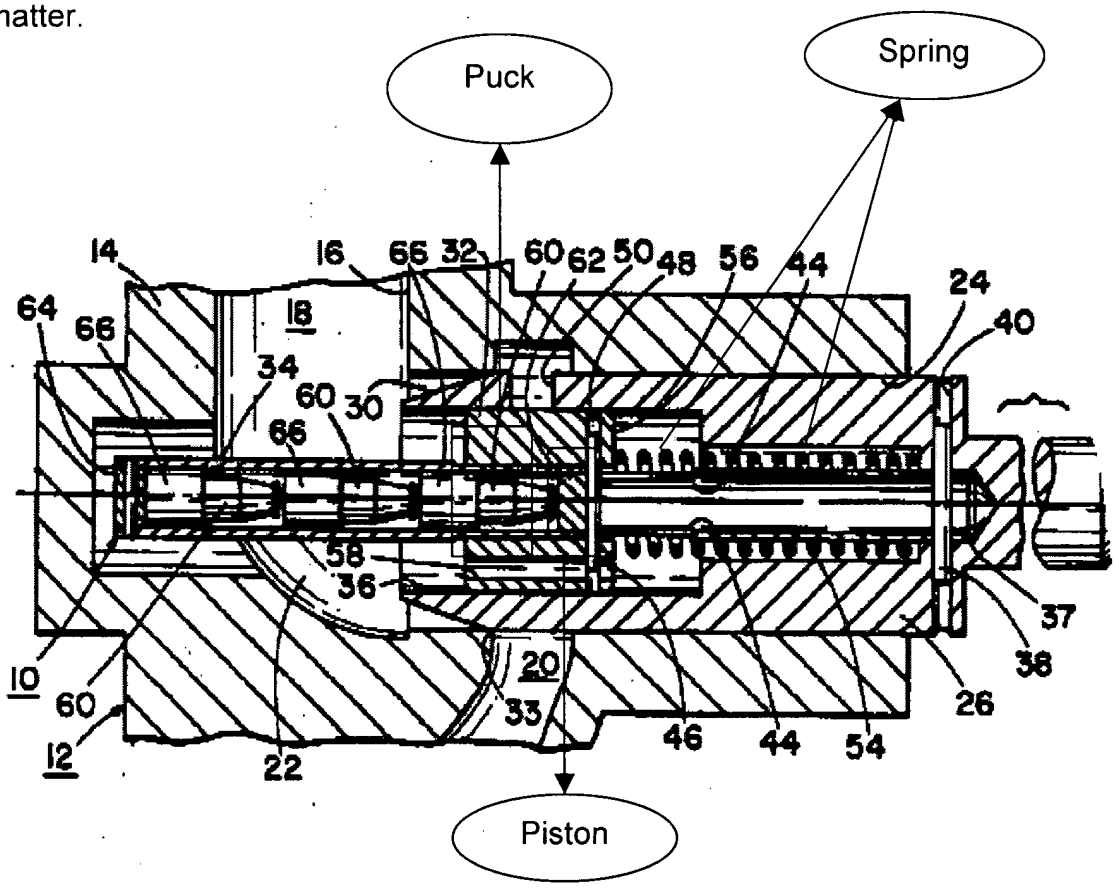

Figure 3 (US 4203545)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mutter in view of Luckett (US 6112368).

In regard to claim 8, Mutter teaches all limitations of claim 3 as previously stated. However he fails to explicitly teach a puck temperature expansion coefficient that is different from the housing material temperature expansion coefficient. Luckett teaches a temperature-compensating valve with a body and a screw portion in the body having different materials with different thermal expansion coefficients, (column 1 lines 15-30 and column 2 lines 10-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to ensure the housing material temperature expansion coefficient was different than the expansion coefficient of the puck to compensate for changes in temperature of the fluid in the valve and avoid thinning or thickening of the valve member, which could lead to a fluid leaking.

Allowable Subject Matter

Claim 29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene L. Bankhead whose telephone number is (571)-272-8963. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571)-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CHERYL TYLER
SUPERVISORY PATENT EXAMINER

Examiner
Art Unit 3744
GB